

**Two New Subspecies of *Calochortus umpquaensis* (Liliaceae) from Southwestern Oregon: *C. umpquaensis* Fredricks ssp. *confertus* Callahan and *C. umpquaensis* Fredricks ssp. *flavicomus* Callahan**

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**ABSTRACT**

Two new subspecies are described for *Calochortus umpquaensis* Fredricks: *C. umpquaensis* Fredricks ssp. *confertus* Callahan and *C. umpquaensis* Fredricks ssp. *flavicomus* Callahan. Both subspecies are isolated from the nominate species and both are endemic to soils derived from ultramafic substrates. Published on-line [www.phytologia.org](http://www.phytologia.org) *Phytologia* 97(4): 275-281 (Oct 1, 2015). ISSN 030319430.

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Nancy Fredricks (1989) published the name *Calochortus umpquaensis* for an endemic mariposa lily found on serpentine-influenced soils in the Umpqua drainage of southwestern Oregon. She collected the type specimen in Douglas County: "8 km southeast of Rt. 138 on County Rt. 17 (Little River Road), southeast of Glide, T26S R3W Sec. 34, on south facing serpentine slope, elev. 300 m, 3 June 1987, Fredricks 382" (holotype: OSC243401). About 20 years later I examined the as yet unmounted type specimen, which was stored in newspaper. The earliest report of this taxon dates back to the 1950s: Reggie Miller, a botanical collector and founder of the Glide Wildflower Show, discovered it near Peel along Little River Road, in Douglas County, Oregon. She collected specimens of the plant, which she recognized as distinctly different from *Calochortus howellii*, and sent them to an Oregon herbarium, either Oregon State University or the University of Oregon. Unfortunately, they appear to have been lost; she did not receive a response from the herbarium and no trace of her specimens has been found in the herbarium at Oregon State University, which now includes the former University of Oregon herbarium (Ray Godfrey, pers. comm.)

In 1989, I found another population of *Calochortus umpquaensis* while exploring Callahan Meadows, just south of Tiller, Oregon. Callahan Meadows is about 20 miles (32 km) south of the site near Peel where Fredricks collected her type specimen. Ray Godfrey, a Douglas County botanist, took Fredricks to the Callahan Meadows site and she agreed that it was range extension of the species that she was describing. Shortly thereafter, for the benefit of the Tiller Ranger District (Umpqua National Forest), I mapped the entire distribution of the populations that lie south of Tiller. At this time I recognized that these plants were quite different from the plants that Nancy described; they lacked transverse nectary membranes on the adaxial petal surface that were crested with dendritic trichomes, the normal trait for *C. umpquaensis*. In contrast, the plants from Callahan Meadows had a "forest" of long simple trichomes, (hence the specific epithet *confertus*); they also lacked the dense papillose region above the nectary zone that is the norm for typical *C. umpquaensis*. The same year, I began exploring all the other ultramafic sites south of Lane Mountain southwest to Brushy Butte in southern Douglas County. There I discovered yet another distinct *Calochortus* with long yellow trichomes above the nectary, incised nectary membranes that appeared as segmented units and a reduction of papillose trichomes distal from the nectary on the adaxial petal surface. The yellow trichomes are unique to these populations, hence the name *flavicomus*, meaning yellow hairs.